Next 1 Page(s) In Document Exempt

# **DECLASS REVIEW by NIMA/DOD**

# MISSILE AND PROPULSION TEST COMPLEX NEAR ZAGORSK, USSR

# INTRODUCTION

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(56-26N 38-11E), covered by KEYHOLE photography of is located at Krasnozavodsk, about 8 nm north of Zagorsk and 44 nm northeast of Moscow (Figure 1). The complex, indicated in collateral reports of  $\boxed{\underline{1}}$  is apparently a major rocket engine test facility and represents an important factor in determining the capabilities of Soviet rocketry. The large vertical test stands and related support facilities revealed by the photography suggest that it is engaged in the development and testing of highthrust liquid-propellant rocket engines. The absence of large-scale manufacturing facilities also suggests a testing rather than a production function. Collateral information indicates a

A large missile and propulsion test complex

close association of this complex with OKB/Plant 456 at Khimki and NII/Plant 88 at Kaliningrad, both of which are involved in the Soviet missile R & D program. 2/ The test complex appears to have no association with the Zagorsk Ammunition Plant Krasnozavodsk about 2 nm to the northeast.

Included within the complex are a Static Test Area, a Possible Storage Area, a Construction Area, and a Support and Housing Area. Roads and rail spurs serving the complex connect with the main roads and rail lines between Moscow, Zagorsk, and Yaroslavl. Electric power is probably supplied by the Moscow power grid, and water is probably taken from local sources, including a possible reservoir southwest of the Static Test Area. Moscow SAM Site E-03 is located about 1.5 nm south of the complex.

#### STATIC TEST AREA

The Static Test Area (Figure 2), measuring approximately 7,500 by 7,200 feet, is situated in a secured area along a wooded ravine in the north-central part of the complex. The major facilities in the area include three vertical test stands and a group of possible horizontal test stands, all with related support buildings, a pos-

sible heating plant, and three probable assembly/ checkout buildings. The number of bays in the test stands cannot be determined and no fuel storage tanks can be identified, but ground scars suggest possible pipelines and storage tanks near two of the test stands.

The general layout of the Static Test Area

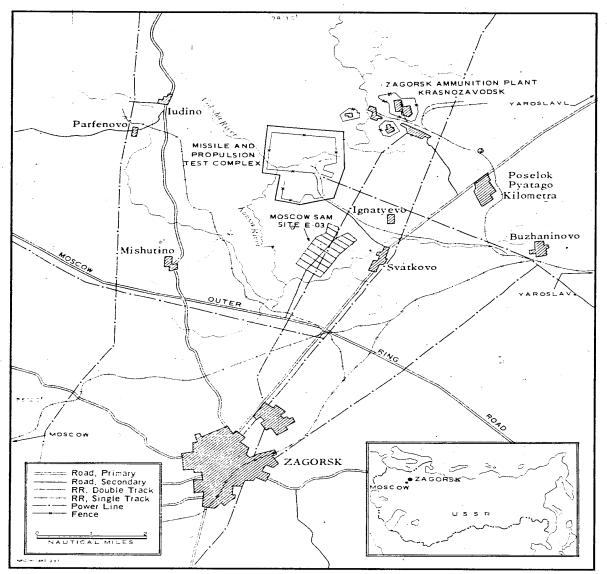


FIGURE 1. LOCATION MAP.

is similar to that of other Soviet static test facilities, notably those associated with the Dnepropetrovsk (DAZ) Probable Missile Production Plant. Vertical Test Stands A and C are comparable to the original test stand at the Kurumoch Propulsion Test Complex, and Vertical Tes: Stand B resembles the stands at the Krasnoyarsk and Omsk propulsion test complexes. The Possible Horizontal Test Stands cannot be compared with any known Soviet static test facilities. The possible heating plant, measuring approximately 260 by 80 feet, and a probable fuel storage pile are situated on either side of a principal rail spur into the test area. @ The probable assembly/checkout buildings near the center of the area have good roads leading to all the test stands; the buildings are approximately 210 by 60 feet, 200 by 80 feet, and 110 by 60 feet. About 35 other buildings, ranging from approximately 40 by 40 feet to 140 by 120 feet, are located in the test area.

Vertical Test Stand A. This stand (Figure 2, Item A), approximately 100 by 100 feet, is located at the northwestern extremity of the Static Test Area. It is probably rail served and possibly used for complete missile testing as well as static engine tests. The stand appears to project over the edge of the ravine, and a large blast deflector extends from its base to the bottom of the ravine. The height of the stand and its elevation above the floor of the ravine cannot be determined. A ramplike structure, approximately 520 feet long and 80 feet wide, connects the test stand with the largest of three support buildings southeast of the stand. The three support buildings measure approximately 410 by 120 feet, 300 by 100 feet, and 80 by 80 feet. A possible fuel storage area is situated southeast of the stand, but no storage tanks are discernible.

<u>Vertical Test Stand B.</u> This stand (Figure 2, Item B), approximately 80 by 80 feet, is located

about 1,530 feet east of Vertical Test Stand A. A blast deflector, apparently paved and measuring approximately 200 by 140 feet, extends from the base of the stand to the bottom of the ravine. The height and elevation of the stand cannot be determined. There are three support buildings about 300 feet to the south. The largest support building is rail served and measures approximately 200 by 120 feet; the smaller buildings both measure approximately 60 by 40 feet.

Vertical Test Stand C. This stand (Figure 2, Item C), approximately 100 by 100 feet, is located about 1,745 feet northeast of Vertical Test Stand B. A paved blast deflector measuring approximately 240 by 180 feet extends from the base of the stand to the bottom of the ravine. A large support building, with two high-bay sections and measuring approximately 200 by 80 feet, lies about 180 feet southeast of the stand. Several smaller buildings measuring approximately 60 by 60 feet and a possible fuel storage tank about 40 feet in diameter are also situated southeast of the stand. Four storage-type buildings south of the standare served by a rail spur; the largest measures approximately 200 by 50 feet, two are approximately 150 by 50 feet, and the smallest is about 115 by 50 feet. Two additional storagetype buildings at the end of the rail spur (possibly fuel storage sheds) measure approximately 40 by 30 feet.

Possible Horizontal Test Stands. This group of four or five small possible horizontal test stands (Figure 2, Item D), which appear to project over the edge of the ravine, is located between Vertical Test Stands A and B. No vertical test stands are visible, and no blast deflectors or burn scars can be discerned. A support building measuring approximately 160 by 80 feet is situated southwest of the possible stands.

# TOP SECRET RUFF

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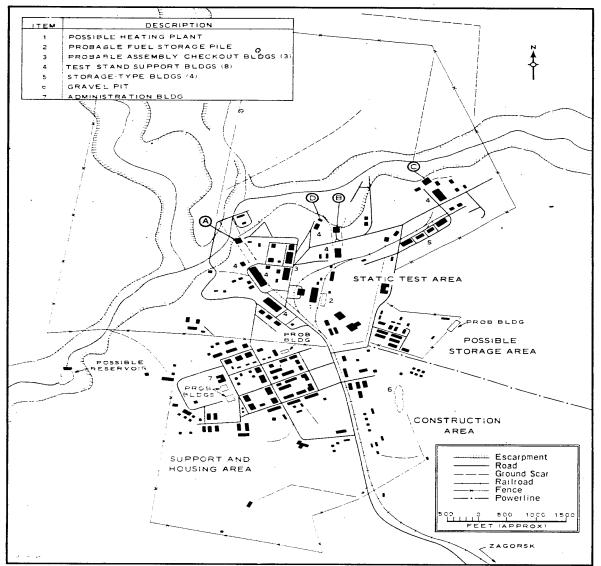


FIGURE 2. MISSILE AND PROPULSION TEST COMPLEX NEAR ZAGORSK, USSR.

#### TOP SECRET RUFF

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### POSSIBLE STORAGE AREA

This area (Figure 2), on the eastern side of the complex adjacent to the Static Test Area, is partially fenced and measures approximately 1,100 by 750 feet. The area contains about 18 storage or barracks-type buildings ranging from approximately 40 by 40 feet to 200 by 60 feet.

# CONSTRUCTION AREA

This area (Figure 2), south of the Possible Storage Area, is used for storage of construction materials. It contains numerous storage-type

buildings ranging from approximately 40 by 40 feet to 150 by 50 feet in size and a gravel pit measuring approximately 600 by 200 feet.

#### SUPPORT AND HOUSING AREA

This area (Figure 2), south of the Static Test Area, is partially fenced and measures approximately 4,000 by 3,000 feet. There are about 50 support-type buildings in the area, ranging from approximately 40 by 40 feet to 200 by 50 feet in size. On-site housing for an undetermined

number of personnel is provided in about 30 apartment-type buildings ranging from approximately 80 by 80 feet to 200 by 70 feet in size. A U-shaped administration building measures approximately 120 by 100 feet.

# TOP SECRET RUFF

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#### REFERENCES

#### MAPS OR CHARTS

ACIC. US Air Target Mosaic, Series 25, Sheets 0154-9969-25 and 2-25MA, 1st ed. Dec 56, scale 1:25,000 (CONFIDENTIAL)

SAC. US Air Target Chart, Series 200, Sheet 0154-23A, 1st ed. Jan 59, scale 1:200,000 (SECRET)

#### DOCUMENTS

1. CIA reports, 31 Oct 55 and 29 Aug 60 (SECRET)

2. CIA report, 19 Jul 54 (SECRET)

#### REQUIREMENT

AF 62-7

# NPIC PROJECT

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